



05/22/2007

ECC

63 Herb Hill Road  
Glen Cove, NY 11542

**STL Edison**

777 New Durham Road  
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679  
www.stl-inc.com

Attention: Mr. Phil O'Dwyer

**Laboratory Results**  
**Job No. G192 - Li Tungsten**

Dear Mr. O'Dwyer:

Enclosed are the results you requested for the following sample(s) received at our laboratory on May 11, 2007.

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
828279	5601-FSS-PB-104B	As Pb
828280	5601-FSS-PB-105B	As Pb
828281	5601-FSS-PB-1029	As Pb

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If you have any questions, please contact me at (732) 549-3900.

Very Truly Yours,

Michael Legg  
Project Manager

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## **Analytical Results Summary**

Client ID: 5601-FSS-PB-104B  
Site: Li Tungsten

Lab Sample No: 828279  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 18.2

**METALS ANALYSIS**

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Qual</u>	<u>M</u>
Arsenic	54.9	1.1		P
Lead	75.2	0.66		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)

Client ID: 5601-FSS-PB-105B  
Site: Li Tungsten

Lab Sample No: 828280  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 20.4

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Qual</u>	<u>M</u>
Arsenic	16.1	1.2		P
Lead	25.3	0.68		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)

Client ID: 5601-FSS-PB-1029  
Site: Li Tungsten

Lab Sample No: 828281  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 24.7

**METALS ANALYSIS**

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Qual</u>	<u>M</u>
Arsenic	9.4	1.2		P
Lead	23.1	0.72		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)

## **General Information**

Chain of Custody

# Environmental Chemical Corporation

1746 Cole Blvd.  
Bldg. 21, Suite 350  
Lakewood, CO 80401  
Phone: (303) 298-7607  
Fax: (303) 298-7837



G192

COC Number:

Customer Name: ECC - Li Tungsten  
Address: 63 Herb Hill Road, Glen Cove, NY 11542

ECC Project Manager: Phil O'Dwyer  
Address: 63 Herb Hill Road, Glen Cove, NY 11542

Contact: Theodore Johnson  
Phone: (303) 472 - 8834  
Fax: (516) 665- 8531

Phone: (614) 402 - 2020  
Customer Project Name: Li Tungsten

SAMPLE NUMBER	DATE	TIME	TYPE	CLIENT SAMPLE IDENTIFIER	TESTS	CONTAINER(S)	MATRIX
5601 - FSS-PB-104B	5/10/2007	14:50	FSS	Parcel B	Total Lead & Arsenic	1 glass jar	Soil
5601 - FSS-PB-105B	5/10/2007	14:55	FSS	Parcel B		1 glass jar	Soil
5601 - FSS-PB-1029	5/10/2007	14:55	FSS	Parcel B		1 glass jar	Soil
N/A							
N/A							
N/A							
N/A							
N/A							
N/A							
N/A							
N/A							
N/A							

828279  
828290  
828281

**Notes:**  
Ship to: Severn Trent Laboratory, EDISON  
777 New Durham Road, Suite 7, Edison, New Jersey, 08817  
Phone: 732-549-3900  
**Request Turnaround Time: 3 Day**

**Samples cooled below 4 C**

Laboratory Receipt Information  
Cooler/Container Intact? Yes \_\_\_ No \_\_\_  
Samples Received At Below 4 C? Yes \_\_\_ No \_\_\_  
Samples Containers Intact? Yes \_\_\_ No \_\_\_  
Cooler/Container Custody Seal? Yes \_\_\_ No \_\_\_

## CUSTODY TRANSFER RECORD

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Print: T. Johnson Sign: <i>TJH</i>	ECC	5/10/2007	16:25	Print: <i>fel dx</i>			
Print: <i>fel dx</i>		<i>5/10/07</i>	<i>14:30</i>	Print: <i>G. m...</i>	<i>Scz</i>		
Print:				Print:	<i>Scz</i>		



## Laboratory Chronicles

**INTERNAL CUSTODY RECORD  
AND  
LABORATORY CHRONICLE  
STL Edison**

777 New Durham Road, Edison, New Jersey  
08817

**Job No:** G192

**Site:** Li Tungsten

**Client:** ECC

**Date Sampled:** 5/10/2007

**Sample No.:** 828279

**Date Received:** 5/11/2007

**Matrix:** SOLID

**METALS**

<u>Analytic Parameter</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
<u>ARSENIC</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>
<u>LEAD</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>

**INTERNAL CUSTODY RECORD  
AND  
LABORATORY CHRONICLE  
STL Edison**

777 New Durham Road, Edison, New Jersey  
08817

**Job No:** G192

**Site:** Li Tungsten

**Client:** ECC

**Date Sampled:** 5/10/2007

**Sample No.:** 828280

**Date Received:** 5/11/2007

**Matrix:** SOLID

**METALS**

<u>Analytic Parameter</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
<u>ARSENIC</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>
<u>LEAD</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>

**INTERNAL CUSTODY RECORD  
AND  
LABORATORY CHRONICLE  
STL Edison**

777 New Durham Road, Edison, New Jersey  
08817

**Job No:** G192

**Site:** Li Tungsten

**Client:** ECC

**Date Sampled:** 5/10/2007

**Sample No.:** 828281

**Date Received:** 5/11/2007

**Matrix:** SOLID

**METALS**

<b>Analytic Parameter</b>	<b>Preparation Date</b>	<b>Technician's Name</b>	<b>Analysis Date</b>	<b>Analyst's Name</b>	<b>QA Batch</b>
<u>ARSENIC</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>
<u>LEAD</u>	<u>5/14/2007</u>	<u>Evans, Donald</u>	<u>5/14/2007</u>	<u>Polidori, Michael</u>	<u>22577</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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## Methodology Review

## Analytical Methodology Summary

### Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2 Rev 4.1. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B.

### Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

### GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

### Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

### Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

#### Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method - 200.7/SW846 6010B and for solid matrix - 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1/7470A and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

<u>Element</u>	<u>Water Test Method Furnace</u>	<u>Solid Test Method Furnace</u>
Antimony	200.9	7041
Arsenic	200.9	7060A
Cadmium	200.9	7131A
Lead	200.9	7421
Selenium	200.9	7740
Thallium	200.9	7841

#### Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

#### Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in water and solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

#### Hexavalent Chromium:

Water samples are analyzed using EPA Method 7196A, EPA Method 7199 or (upon request) USGS -1230-35. Soil samples are subjected to alkaline digestion via EPA Method 3060A prior to analysis by EPA Method 7196A or EPA Method 7199.

#### Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

#### Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

- Ignitability - Method 1020A
- Corrosivity - Water pH Method 9040B  
Soil pH Method 9045C
- Reactivity - Chapter 7, Section 7.3.3 and 7.3.4  
respectively for hydrogen cyanide and  
hydrogen sulfide release
- Toxicity - TCLP Method 1311

#### Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 18th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.



## Data Reporting Qualifiers

#### ORGANIC DATA REPORTING QUALIFIERS

- ND - The compound was not detected at the indicated concentration.
- J - Mass spectral data indicates the presence of a compound that meets the identification criteria. The result is less than the specified quantitation limit but greater than or equal to the method detection limit. The concentration given is an approximate value.
- B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
- P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
- \* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

#### INORGANIC DATA REPORTING QUALIFIERS (SW-846 METHODS ONLY)

- ND/U - The compound was not detected at the indicated concentration.
- B - Reported value is less than the Practical Quantitation Limit but greater than or equal to the Instrument Detection Limit.
- E - The reported value is estimated because of the presence of interference. See explanatory note in the Nonconformance Summary if the problem applies to all of the samples or on the individual Inorganic Analysis Data Sheet if the problem is isolated.
- M - Duplicate injection precision not met on the Furnace Atomic Absorption analysis.
- N - The spiked sample recovery is not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- \* - Duplicate Analysis is not within control limits.
- W - Post digestion spike for Furnace Atomic Absorption analysis is out of control.
- + - Correlation coefficient for MSA is less than 0.995.

#### M Column - Method Qualifiers

- P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP).
- A - Flame Atomic Absorption Spectroscopy (FAA).
- F - Graphite Furnace Atomic Absorption Spectroscopy (GFAA).
- CV - Cold Vapor Atomic Absorption Spectroscopy.

## Non-Conformance Summary



## Nonconformance Summary

STL Edison Job Number: G192

**Client:** ECC

**Date:** 5/22/2007

### Sample Receipt:

Sample delivery conforms with requirements.

### Metals:

All data conforms with method requirements.

I certify that the test results contained in this data package meet all requirements of NELAC both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Director or their designee, as verified by the following signature.

Michael Legg  
Project Manager

## **Metals Forms and Data**

Analytical Results Summary

Client ID: 5601-FSS-PB-104B  
Site: Li Tungsten

Lab Sample No: 828279  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 18.2

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Qual</u>	<u>M</u>
Arsenic	54.9	1.1		P
Lead	75.2	0.66		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)

Client ID: 5601-FSS-PB-105B  
Site: Li Tungsten

Lab Sample No: 828280  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 20.4

# METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg <u>(Dry Weight)</u>	Instrument Detection <u>Limit</u>	<u>Qual</u>	<u>M</u>
Arsenic	16.1	1.2		P
Lead	25.3	0.68		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)

Client ID: 5601-FSS-PB-1029  
Site: Li Tungsten

Lab Sample No: 828281  
Lab Job No: G192

Date Sampled: 05/10/07  
Date Received: 05/11/07

Matrix: SOLID  
Level: LOW  
% Moisture: 24.7

#### METALS ANALYSIS

<u>Analyte</u>	Analytical Result Units: mg/kg (Dry Weight)	Instrument Detection Limit	<u>Qual</u>	<u>M</u>
Arsenic	9.4	1.2		P
Lead	23.1	0.72		P

Qual Column - Data Reporting Qualifiers (See Sec 2 of Report)  
M Column - Method Code (See Section 2 of Report)



## Blank Results Summary

# BLANKS

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192

Batch No.: 22577\_

Preparation Blank Matrix (soil/water): SOIL\_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic	4.7	U	4.7	U	4.7	U	4.7	U	0.470	U	P
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium	3.0	U	3.0	U	3.0	U	3.0	U	0.300	U	P
Cobalt											NR
Copper											NR
Iron											NR
Lead	2.7	U	2.7	U	2.7	U	-2.9	B	0.270	U	P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel	2.4	U	2.4	U	2.4	U	2.4	U	0.240	U	P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Molybdenum											NR

# BLANKS

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Aluminum											NR
Antimony											NR
Arsenic	4.7	U	4.7	U	4.7	U	4.7	U			P
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium	3.0	U	3.0	U	3.0	U	3.0	U			P
Cobalt											NR
Copper											NR
Iron											NR
Lead	2.7	U	2.7	U	2.7	U	2.7	U			P
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel	2.4	U	2.4	U	2.4	U	2.4	U			P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Molybdenum											NR

## Calibration Summary

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

Initial Calibration Source: INORG VENT\_\_

Continuing Calibration Source: INORG VENT\_\_

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic	5000.0	4909.77	98.2	5000.0	5003.12	100.1	5060.61	101.2	P
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium	5000.0	5012.65	100.3	5000.0	5069.53	101.4	5135.71	102.7	P
Cobalt									NR
Copper									NR
Iron									NR
Lead	10000.0	10036.26	100.4	10000.0	10147.32	101.5	10251.56	102.5	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel	2500.0	2507.75	100.3	2500.0	2537.41	101.5	2573.70	102.9	P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

(1) Control Limits: Mercury 80-120; ICP Metals 90-110; Furnace AA Metals 80-120

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

Initial Calibration Source: INORG VENT\_\_

Continuing Calibration Source: INORG VENT\_\_

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic				5000.0	5145.55	102.9			P
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium				5000.0	5234.09	104.7			P
Cobalt									NR
Copper									NR
Iron									NR
Lead				10000.0	10438.00	104.4			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel				2500.0	2625.88	105.0			P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenum									NR

(1) Control Limits: Mercury 80-120; ICP Metals 90-110; Furnace AA Metals 80-120

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_      Lab Job No.: G192      Batch No.: 22577\_

Initial Calibration Source:      INORG VENT\_\_

Continuing Calibration Source:      INORG VENT\_\_

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic	5000.0	4821.76	96.4	5000.0	4858.57	97.2	4918.90	98.4	P
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium	5000.0	4931.23	98.6	5000.0	4932.79	98.7	4980.95	99.6	P
Cobalt									NR
Copper									NR
Iron									NR
Lead	10000.0	9779.09	97.8	10000.0	9812.59	98.1	9962.41	99.6	P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel	2500.0	2450.72	98.0	2500.0	2460.05	98.4	2477.96	99.1	P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenum									NR

(1) Control Limits: Mercury 80-120; ICP Metals 90-110; Furnace AA Metals 80-120

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

Initial Calibration Source: INORG VENT\_\_

Continuing Calibration Source: INORG VENT\_\_

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum									NR
Antimony									NR
Arsenic				5000.0	4895.09	97.9			P
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium				5000.0	4961.08	99.2			P
Cobalt									NR
Copper									NR
Iron									NR
Lead				10000.0	9908.90	99.1			P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel				2500.0	2470.44	98.8			P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenu									NR

(1) Control Limits: Mercury 80-120; ICP Metals 90-110; Furnace AA Metals 80-120



## ICP Interference Check Results Summary

## ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

ICP ID Number: TRACE1 TJA61 ICS Source: INORG VENT\_\_

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	500000	500000	490260	493480.9	98.7	508918	505102.3	101.0
Antimony		100		110.4	110.4		116.8	116.8
Arsenic		100		99.5	99.5		103.9	103.9
Barium		100		105.8	105.8		112.4	112.4
Beryllium		100		99.8	99.8		102.3	102.3
Cadmium		100		96.5	96.5		101.4	101.4
Calcium	500000	500000	494990	492417.7	98.5	511522	502157.7	100.4
Chromium		100		98.8	98.8		100.0	100.0
Cobalt		100		97.9	97.9		101.0	101.0
Copper		100		102.2	102.2		106.3	106.3
Iron	200000	200000	205038	204634.1	102.3	209595	206368.4	103.2
Lead		100		100.2	100.2		100.9	100.9
Magnesium	500000	500000	534530	534296.5	106.9	548656	540676.6	108.1
Manganese		100		98.5	98.5		98.2	98.2
Mercury								
Nickel		100		101.0	101.0		102.8	102.8
Potassium								
Selenium		100		93.7	93.7		97.2	97.2
Silver		100		102.2	102.2		106.8	106.8
Sodium								
Thallium		100		101.9	101.9		109.3	109.3
Vanadium		100		97.3	97.3		103.9	103.9
Zinc		100		100.3	100.3		109.8	109.8

## ICP INTERFERENCE CHECK SAMPLE

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_ Lab Job No.: G192 \_\_\_\_\_ Batch No.: 22577\_

ICP ID Number: TRACE1 TJA61 ICS Source: INORG VENT\_\_

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	500000	500000	488488	490767.6	98.2	496783	491137.4	98.2
Antimony		100		105.7	105.7		105.7	105.7
Arsenic		100		98.0	98.0		99.7	99.7
Barium		100		107.0	107.0		106.9	106.9
Beryllium		100		98.6	98.6		100.0	100.0
Cadmium		100		94.6	94.6		95.7	95.7
Calcium	500000	500000	486828	484237.8	96.8	490590	490942.6	98.2
Chromium		100		97.6	97.6		98.5	98.5
Cobalt		100		95.2	95.2		97.8	97.8
Copper		100		103.4	103.4		102.3	102.3
Iron	200000	200000	203054	202437.7	101.2	205103	205136.6	102.6
Lead		100		103.0	103.0		101.5	101.5
Magnesium	500000	500000	530328	529081.8	105.8	538340	534451.2	106.9
Manganese		100		99.2	99.2		100.1	100.1
Mercury								
Nickel		100		99.2	99.2		100.3	100.3
Potassium								
Selenium		100		92.1	92.1		96.7	96.7
Silver		100		103.6	103.6		104.4	104.4
Sodium								
Thallium		100		91.6	91.6		93.7	93.7
Vanadium		100		94.7	94.7		95.3	95.3
Zinc		100		102.8	102.8		101.4	101.4

## Spike Sample Recovery Summary

LAB SAMPLE NO.

## SPIKE SAMPLE RECOVERY

BSS051407

Lab Name: STL\_EDISON

Lab Code: 12028 Lab Job No.: G192

Batch No.: 22577

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic	75-125	193.4721		0.4700	U	200.00	96.7		P
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium	75-125	19.5716		0.3000	U	20.00	97.9		P
Cobalt									NR
Copper									NR
Iron									NR
Lead	75-125	49.8747		0.2700	U	50.00	99.7		P
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel	75-125	50.3301		0.2400	U	50.00	100.7		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Molybdenum									NR

Comments:

LAB SAMPLE NO.

## SPIKE SAMPLE RECOVERY

828270MS

Lab Name: STL\_EDISON

Lab Code: 12028 Lab Job No.: G192

Batch No.: 22577

Matrix (soil/water): SOIL

Level (low/med): LOW

% Solids for Sample: 93.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic	75-125	181.5110	1.0108 U	215.05	84.4		P
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium	75-125	69.2346	53.3925	21.51	73.6	N	P
Cobalt							NR
Copper							NR
Iron							NR
Lead	75-125	52.9847	6.5275	53.76	86.4		P
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel	75-125	54.9718	7.8084 B	53.76	87.7		P
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Molybdenum							NR

Comments:

## Sample and MS Duplicate Results Summary

LAB SAMPLE NO.

## DUPLICATES

LCSSD055-D

Lab Name: STL\_EDISON

Lab Code: 12028\_ Lab Job No.: G192

Batch No.: 22577\_

Matrix (soil/water): SOIL\_

Level (low/med): LOW\_

% Solids for Sample: 100.0

% Solids for Duplicate: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum						NR
Antimony						NR
Arsenic		77.2236	79.9514	3.5		P
Barium						NR
Beryllium						NR
Cadmium						NR
Calcium						NR
Chromium		84.2680	87.7414	4.0		P
Cobalt						NR
Copper						NR
Iron						NR
Lead		78.7098	83.8990	6.4		P
Magnesium						NR
Manganese						NR
Mercury						NR
Nickel		104.6354	109.1888	4.3		P
Potassium						NR
Selenium						NR
Silver						NR
Sodium						NR
Thallium						NR
Vanadium						NR
Zinc						NR
Molybdenum						NR



LAB SAMPLE NO.

DUPLICATES

828270D

Lab Name: STL\_EDISON

Lab Code: 12028\_ Lab Job No.: G192

Batch No.: 22577\_

Matrix (soil/water): SOIL\_

Level (low/med): LOW\_

% Solids for Sample: 93.0

% Solids for Duplicate: 93.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum						NR
Antimony						NR
Arsenic		1.0108 U	1.0108 U			P
Barium						NR
Beryllium						NR
Cadmium						NR
Calcium						NR
Chromium		53.3925	62.3196	15.4		P
Cobalt						NR
Copper						NR
Iron						NR
Lead		6.5275	7.8748	18.7		P
Magnesium						NR
Manganese						NR
Mercury						NR
Nickel	4.3	7.8084 B	11.9039	41.6		P
Potassium						NR
Selenium						NR
Silver						NR
Sodium						NR
Thallium						NR
Vanadium						NR
Zinc						NR
Molybdenum						NR

## Laboratory Control Samples Results Summary

LABORATORY CONTROL SAMPLE

Lab Name: STL\_EDISON\_\_\_\_\_

Lab Code: 12028\_      Lab Job No.: G192      Batch No.: 22577\_

Solid LCS Source: ERA D055\_\_\_\_\_

Aqueous LCS Source: \_\_\_\_\_

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum								
Antimony								
Arsenic				88.8	77.2		71.8    106.0	86.9
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				97.9	84.3		77.2    118.0	86.1
Cobalt								
Copper								
Iron								
Lead				88.9	78.7		72.7    105.0	88.5
Magnesium								
Manganese								
Mercury								
Nickel				116.0	104.6		95.8    136.0	90.2
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								
Molybdenum								

## Serial Dilution Summary

LAB SAMPLE NO.

## ICP SERIAL DILUTION

828270L

Lab Name: STL\_EDISON

Lab Code: 12028\_ Lab Job No.: G192

Batch No.: 22577\_

Matrix (soil/water): SOIL\_

Level (low/med): LOW\_

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ- ence	Q	M
Aluminum							NR
Antimony							NR
Arsenic	4.70	U	23.50	U			P
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium	248.28		251.28		1.2		P
Cobalt							NR
Copper							NR
Iron							NR
Lead	30.35		30.70		1.2		P
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel	36.31	B	34.62	B	4.7		P
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR

## Analysis Run Log

## ANALYSIS RUN LOG

Lab Name: STL\_EDISON\_\_\_\_\_

Contract: \_\_\_\_\_

Lab Code: 12028\_ Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_ SDG No.: 22577\_

Instrument ID Number: TRACE1 TJA61\_

Method: P\_

Start Date: 05/14/07

End Date: 05/14/07

Lab Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T V	Z N	M O	
1CAL-BLK	1.00	1101		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
T1CAL1	1.00	1106		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
T1CAL2	1.00	1112		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
T1CAL3	1.00	1117		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	1123																									
ICV/CCV	1.00	1129				X					X				X			X									
ICB/CCB	1.00	1134				X					X				X			X									
ICSA	1.00	1140				X					X				X			X									
ICSAB	1.00	1148				X					X				X			X									
ZZZZZZ	1.00	1154									X				X			X									
ZZZZZZ	1.00	1159																									
ZZZZZZ	1.00	1205																									
ZZZZZZ	10.00	1211																									
ZZZZZZ	10.00	1216																									
ZZZZZZ	10.00	1222																									
ZZZZZZ	10.00	1227																									
ZZZZZZ	10.00	1233																									
CCV	1.00	1238				X					X				X			X									
CCB	1.00	1244				X					X				X			X									
ZZZZZZ	5.00	1249									X				X			X									
ZZZZZZ	5.00	1255																									
ZZZZZZ	5.00	1300																									
ZZZZZZ	5.00	1306																									
ZZZZZZ	5.00	1311																									
SS051407	1.00	1326				X					X				X			X									
BS051407	1.00	1331				X					X				X			X									
LCSSD055	2.00	1337				X					X				X			X									
SSD055-D	2.00	1342				X					X				X			X									
828540	2.00	1348				X																					
CCV	1.00	1354				X					X				X			X									
CCB	1.00	1359				X					X				X			X									
828541	2.00	1405				X																					

## ANALYSIS RUN LOG

Contract:

SAS No.:                      SDG No.:22577

Method: P

End Date: 05/14/07

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## ANALYSIS RUN LOG

Lab Name: STL\_EDISON\_\_\_\_\_

Contract: \_\_\_\_\_

Lab Code: 12028\_ Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_ SDG No.: 22577\_

Instrument ID Number: TRACE1 TJA61\_

Method: P\_

Start Date: 05/14/07

End Date: 05/14/07

Lab Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K E	S G	A A	N L	T L	V N	Z O	M
1CAL-BLK	1.00	1545		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T1CAL1	1.00	1551		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T1CAL2	1.00	1556		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
T1CAL3	1.00	1602		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ	1.00	1608																									
ICV/CCV	1.00	1613				X					X				X				X								
ICB/CCB	1.00	1619				X					X				X				X								
ICSA	1.00	1624				X					X				X				X								
ICSAB	1.00	1630				X					X				X				X								
ZZZZZZ	1.00	1636																									
ZZZZZZ	1.00	1642																									
ZZZZZZ	1.00	1647																									
828270D	2.00	1653				X					X				X				X								
828270	2.00	1658									X																
828270L	2.00	1704				X					X				X				X								
828270MS	2.00	1709				X					X				X				X								
ZZZZZZ	2.00	1715																									
CCV	1.00	1720				X					X				X				X								
CCB	1.00	1726				X					X				X				X								
828268	2.00	1731									X																
828269	2.00	1737									X																
828271	2.00	1742									X																
828272	2.00	1748									X																
828273	2.00	1753									X																
828274	2.00	1759									X																
828430	2.00	1804																	X								
828431	2.00	1810																	X								
828432	2.00	1816																	X								
828433	2.00	1821																	X								
CCV	1.00	1827				X					X				X				X								
CCB	1.00	1832				X					X				X				X								
828279	2.00	1838				X									X												

## ANALYSIS RUN LOG

Contract: \_\_\_\_\_

SAS No. : \_\_\_\_\_ SDG No. : 22577

Method: P

End Date: 05/14/07

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